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Tree Farms: A Pacific Northwest Business Asset

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By W. D. HAGENSTEIN
Forest Engineer, Forest Conservation
Committee of Pacific Northwest Forest Industries

The first "tree farm" in the United States was dedicated in 1941 in Grays Harbor County, Washington. After an intensive forestry study, the Weyerhaeuser Timber Co. set aside a 120,000-acre property for the permanent production of timber crops. The property was named the Clemons Tree Farm in memory of Charles Clemons, pioneer Grays Harbor County logger. The term "tree farm" implies business forest management.

Prior to the establishment of the Clemons Tree Farm, forest landowning companies in the Pacific Northwest had made a number of starts in forestry as far back as 1901. They soon learned that many serious obstacles beset them. Chief among these was the big gamble with forest enemy number one—fire. Because of the huge accumulations of highly inflammable debris in century-old forests and the frequent protracted droughts during July and August, the forest-fire problem in western Oregon and Washington was unparalleled elsewhere in the world.

To solve the fire problem, private landowners in western Oregon and Washington organized a number of fire-protection associations over forty years ago. Their early attempts emphasized safeguarding merchantable timber, logging facilities, and other property. The idea of protecting baby trees and saplings didn't enter the thinking of that period. Because of inadequate technical forestry knowledge and know-how of fire protection, results of the early protection efforts were hit and miss for nearly twenty years.

As the forestry profession developed in the region, its research was focused primarily on problems of fire prevention and control. An important discovery was that relative humidity, the amount of moisture in the air as compared with what it could hold at the saturation point, was the best indicator of impending fire danger. Following this discovery, private timber landowners, logging operators, and forest-protection organizations began to watch weather very closely. By 1933 the state forest-protection laws in Oregon and Washington had been modified in the light of operators' experience to provide a good basic code. But more was needed; fire records indicated that, despite good compliance with the forest-protection laws, the region was burning far too many young trees each dry summer.

Realization of this pointed the forestry efforts of a handful of private foresters toward the development of a system of forest management, which offered possibilities for overcoming the fire limitations to economically successful forest management. They termed the system "tree farming."

After studying the fire history on the property which was destined to become the Clemons Tree Farm, foresters determined that, if the company were to manage successfully its forest properties for continuing crops of wood, the fire problem would have to be approached on an entirely different basis than formerly. Their thesis was that a forest property must have protection commensurate with its worth. They established the worth of the company's Clemons property by determining the growing capacity of the land, the fire losses of second-growth trees on lands which had been harvested, and the replacement cost of such trees by artificial means. In this way they demonstrated how much could be spent for fire protection designed to keep within a predetermined maximum the loss on areas burned over annually. They found that the average annual expenditures for forest-fire protection had been about 8 cents per acre and that the acreage of young trees lost each year under this intensity of protection was costing the company a great deal more. To replace the trees lost would require many times the outlay for adequate fire protection. An immediate capital investment of about $1.00 per acre to provide satisfactory fire-protection roads, fire-detection facilities, a communication system, and modern mechanized fire equipment similar to that used for protection of urban property was recommended. An average annual expense of 25 to 30 cents per acre was estimated as necessary to complete the job.

The company, convinced of the business logic of these recommendations, undertook the type of fire protection suggested. The capital outlay and annual carrying charges for forest-fire protection appeared to be a reasonable insurance premium to assure the long-term investor, the tree farmer, that there would be a crop of ripe trees available when harvest time rolled around.

Basically, that is the genesis of the tree-farm program in America's Northwest corner, the Douglas-fir region. With a modest beginning on 120,000 acres as recent as 1941, the program has since spread throughout the nation, and there are now over 20 million acres of taxpaying forest lands certified as tree farms in twenty-seven states.

Private foresters have been the leaders in spreading the tree-farm idea to privately owned forest lands, through their efforts to convince forest owners that money can be made in growing trees as well as converting them into forest products. Men conserve things of value; and, when they are shown that cutover forest land is valuable for growing another crop of timber from which they can expect a reasonable return, nothing can stop them from practicing such forestry as will assure that return. The profit motive is the strongest impelling incentive to forest management, just as it is for good management of other renewable natural resources.

Nearly one-third or 3,270,692 acres of the taxpaying forest lands in western Oregon and Washington are now

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WESLEY C. BALLAINE, Editor

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certified as tree farms. This is indicative of the magnitude of nine years progress since the Clemons Tree Farm of 120,000 acres was dedicated in 1941. Along with the increase in the acreage of certified tree farms in this region has come the continued increase in employment of professional foresters by private landowners. In the Douglas-fir region today there are 250 professionally trained foresters whose principal job is to provide efficient fire protection, grow timber, plan timber harvesting, and otherwise manage taxpaying lands for continuing forest crops. Foresters have become just as much a necessary and integral part of the forest-products business as sawmill managers, logging superintendents, salesmen, engineers, accountants, and lawyers. In addition to the tree farms in the western halves of these two states, there are also 1,344,779 acres of certified tree farms in eastern Oregon and Washington.

Tree farms are important business assets of the Pacific Northwest for many economic reasons. To demonstrate the economic impact of wood as a supplier of the wherewithal for the sustenance of the 4 million people in Oregon and Washington, a few general statistics are pertinent.

Oregon and Washington furnish the people of the United States with more than one-fourth of their total annual forest-products needs in the form of lumber, wood pulp and paper, plywood and veneer, shingles, sash and doors, poles and piling, railroad ties, and a wide variety of refined products such as wood furniture, caskets, wood pipe and tanks, cooperage, ladders, crossarms, masts and spars, and woodenware. Over 2,500 of Oregon and Washington's nearly 7,000 industrial establishments use wood as their basic raw material. The direct wage earners employed in 1948 by the wood-using industry was 170,000, more than the total employed in the use of any other single raw material. The direct wages earned by this large group of industrial workers was about $500 million. The value of forest products at Oregon and Washington wood-using plants in 1948 was just a few dollars shy of $1.5 billion. This is $375 worth of forest products manufactured for every man, woman, and child resident in the two states. This is one-half again as much as agriculture contributes to the Northwest's economy; the 1948 value of the region's agricultural products, including price supports, was about $1 billion.

In addition to the direct employment provided by the wood-using industry, the services and products of other Northwest employers should be considered in an appraisal of the effect of wood upon the region's economy. Fifty-eight per cent of the 1948 revenue freight tonnage of Class I steam railways originating in Oregon and Washington consisted of forest products. The number of railway employees affected directly by forest products is more than 20,000. Eighty per cent of the entire revenue tonnage of water carriers originating in Oregon and Washington is forest products.

Another substantial payroll directly attributable to the forest industry is the payroll of the diversified manufacturing and distribution concerns which cater to its materials, supply, and equipment needs. There are no reliable data available as to the number of people so employed, but the number has been estimated to be between 30,000 and 35,000.

As a source of taxes the forest industry undoubtedly is the principal regional contributor, though it is impossible to estimate the exact proportion of its contribution to the tax revenues of the two states.

The wage earners directly affected by the growing, harvesting, manufacturing, and marketing of forest products in the two Northwest states probably total about 250,000. It is obvious that the primary wage earners in the forest-products industry, whose average hourly earnings are as high as any group of heavy industrial workers in the world, contribute importantly to the economy of the Northwest's 4 million people. The continuation of this contribution to the two states' well-being depends entirely upon how forest lands are managed to provide the region's principal industry with a continuing supply of raw material.

While a tree farmer's intent is to grow timber for harvest and use, local benefits to soil and water conservation, provision of a natural habitat for wild life, and, to a limited extent, recreation opportunities will also accrue from the movement. But the recreation-seeking public must cooperate in the protection of private forest lands, especially during those portions of the year when the fire risk is high; one forest fire started during bad fire weather can completely obliterate 10 to 100 years of forest growth.

Tree farms are not just a public-relations stunt designed to convince the public that something is being done about forest management on taxpaying forest land. Tree farms are serious private timber-growing ventures ranging from just a few woodland acres of an enlightened farmer to managed industrial forest properties of 100,000 or more acres. Each in its own way is contributing to the regional and national wood pile through good forest management. The way this job is being done is by no means perfect as yet. But the transition from mere fire protection, and that not always effective, to forestry—in which the attainment of an annual balance between timber growth and timber harvest is the aim—is not something that can be accomplished in a few days, weeks, or years. It took Europe several centuries to attain its present intensity of managed forests. Forestry is only fifty years old in the United States and younger than that in Oregon and Washington; but a substantial start has been made and the passing of each year shows discernible progress. In the Douglas-fir region today, many of the best-managed forests are on private land.

Privately owned forests in western Oregon and Washington are certified as tree farms in the following manner:

(1) An owner signifies his intention to qualify as a certified tree farmer in a formal application to the Forest Conservation Committee of Pacific Northwest Forest Industries; he agrees (a) to maintain a specified area of forest land for growing forest crops; (b) to provide adequate protection from fire, insects, disease and destructive grazing; (c) to conduct planned timber harvesting to assure

reforestation; and (d) to supply information concerning his progress to the Forest Conservation Committee.

(2) The applicant is required to submit a plan of development for his property, covering fire protection, timber-harvesting practices, and plans for artificial reforestation, if necessary, for the first five years following date of his application.

(3) After receipt of a formal application for certification of a private forest as a tree farm, a staff forester of the Forest Conservation Committee examines the property on the ground to determine its suitability as a tree farm. The forester discusses with the owner the policy for his property. If satisfied that the owner sincerely desires to enter into timber growing as a long-term business venture and will agree to carry out the pledges covered in the application, the forester recommends to the Forest Conservation Committee that the property be certified as a tree farm. At a regular meeting of the Forest Conservation Committee the landowner appears to support his application and is questioned concerning his plans and policy. Should the application and the recommendation of the staff forester not be acceptable to the Forest Conservation Committee, the property is not certified as a tree farm.

Once a property has been certified, annual inspections are made to determine whether the landowner is living up to his pledges for constructive forest management. If it is found that the owner is not living up to the rules of the game, his certificate may be revoked. Four certificates for lands in western Oregon and Washington have been revoked; where violations of landowners' pledges are observed, certificates will continue to be revoked. The only kind of timber-growing program which means anything to the owner of the property so pledged is one which produces results. The Forest Conservation Committee does not condone the certification of taxpaying forests where the owner won't or can't do the job. The tree-farm program is not a philanthropic movement designed to do a fine job of forest management exclusively for public benefit; but, if it succeeds in doing a good job of forest management, the ultimate benefits will accrue to the public at large in the form of adequate timber supplies.

The Pacific Northwest's people have not been sufficiently acquainted with the tree-farm program to realize fully that a tree farm is not a forest property which has been badly treated in the past and is being reforested exclusively by artificial means. Actually, a tree farm may have old-growth timber which is ready for harvest now or in the next few years, natural second-growth trees which are too young for use, trees younger still which have developed naturally on lands from which the original forests have been harvested, lands which did not reforest naturally because of bad cutting or fire and which therefore need rehabilitation, and lands which have been harvested so recently that it is not certain yet whether they will reforest naturally or will require help from man. Present Douglas-fir tree farms have nearly one-half of their acreage occupied by mature timber ripe for harvest, and one-fourth is in natural second-growth trees too young and small for use; the balance consists of land recently harvested, hand-high seedlings, and areas needing rehabilitation.

Because of systematic reservation of seed-bearing timber on each harvest area and because of the subsequent fire protection provided, 90 per cent of the lands currently being harvested in the Douglas-fir region are reforesting by natural means. The balance must be reforested artifically by planting of nursery-grown seedlings or by seeding by airplane or by hand.

When tree farms were begun in the Douglas-fir region, there was no source of nursery-grown seedlings for artificial reforestation of taxpaying lands; in 1942 the forest industry developed a cooperative forest tree nursery for furnishing trees at cost for commercial reforestation by landowners in western Oregon and Washington. This nursery has supplied sufficient seedlings since it began operation nine years ago to put nearly 60,000 idle acres back to work growing raw material. The nursery is a continuing project to provide artificial means of assuring seedling trees for reforestation wherever natural means fail or where hard luck is encountered in fire protection.

Forestry must not be confounded with tree planting, because tree planting makes up a very small part, although important, in its practice. Common-sense timber harvesting practices, where seed trees are reserved and good protection provided, will do the job of replacing nine out of ten trees cut. It is only for the tenth tree where nature fails that man must lend a hand. Tree farms do not mean planting trees. They do mean the management of taxpaying forest properties by wise cutting of mature timber; skillful reservation of seed-bearing trees to reforest the lands harvested; planting or seeding where nature fails; utilizing the raw material to the fullest extent possible; providing society with a continuing supply of needed forest products; assuring plentiful well-paying jobs in forest communities; maintaining a local tax base; and contributing to the happiness and welfare of the nation.

In Oregon and Washington, where the public owns over 50 per cent of the commercial forest land and where the balance is held by taxpayers, it is necessary that forest management become a part of our economic system. The public forests are managed under forestry principles which assure continuous production. The private forests, which to date have contributed more than 90 per cent of the annual raw-material requirements of the region's principal industry, have not always been handled in the best possible manner, because of economic impediments and the uncertainty of the success of forest-fire protection efforts. Tree farms, which the wood-using industry is proud it sired, have already put nearly one-third of western Oregon and Washington's highly productive private forest land under permanent forest management by showing the way that timber growing can be made pay—through adequate fire protection, sound harvesting practices, artificial reforestation where needed, and full wood utilization. Promotion of tree farms on lands not so dedicated as yet is continuing each year; eventually the owners of most privately held forests will be practicing tree-farm management.

The tree farms which are already established in the region constitute an important business asset which helps assure a continued high standard of living for the citizens of the Pacific Northwest. The continued success and further development of tree farms will depend upon public support, particularly in the matter of fire prevention, and sympathetic understanding of the fact that timber growing is a long-term program, which must be made to pay its way as long as the American way is opportunity for private ownership and initiative.

CURRENT BUSINESS TRENDS IN OREGON

Lumber. Snow and freezing temperatures caused the January 1950 lumber output of Oregon and Washington to decline substantially below that of December 1949. Shipments were also curtailed, although not to so great an extent as production. The result was a decrease in mill stocks and an increase in unfilled orders. Actually, the unfilled orders might have increased more than the reported figures indicate, were it not for the fact that some mills are not accepting new orders until they reduce the file they have on hand. The January 1950 and 1949 data for the industry follow (thousands of board feet):

	Production	Shipments	Orders Rec'd
1950	577,772	641,696	925,670
1949	609,837	627,274	743,651

The relationship between orders received and production indicates that the price of lumber is firming.

Gasoline Consumption. During December 1949 taxes were paid in Oregon on 36,471,743 gallons. This was greater than December 1948 (34,824,016), but less than November 1949 (38,410,750).

Failures. During January 1950 there were 18 business failures in Oregon, the liabilities of which totalled $254,000. Four of these were in Portland, and their liabilities amounted to $36,000.

Food Prices. The index of the price level of foods purchased by moderate-income families in Portland stood at 206.3 on December 15, 1949. This was a decline of 0.7 per cent and 7.7 per cent from November 15, 1949 and December 15, 1948, respectively—but still more than twice the 1939 average.

Department-Store Sales. The dollar volume of Portland department-store sales continues to run well below a year ago. Percentage changes in sales in Portland and other Pacific Coast cities, compared to a year ago, are given below to show trends.

City	Week Ending Feb. 4, 1950	Calendar Year to Feb. 4, 1950
Portland	−20	−21
Los Angeles	+ 3	− 7
San Diego	+ 6	− 2
Oakland	− 2	− 9
San Francisco	+ 3	− 6
Seattle	− 2	−13
Spokane	− 1	−11
United States	+11	− 5

Unemployment. Seasonal conditions forced unemployment to new highs during the early weeks of 1950. During the week of January 28, 46,194 persons in the state were receiving unemployment-compensation benefits, nearly half of whom were associated with the lumber industry. The following table gives a partial breakdown by industry and city:

Industry	Total	Portland	Eugene	Salem	Ore. City	Astoria	Klam. Falls
Total	46,194	12,868	4,930	4,181	2,061	1,951	1,276
Agri., for., fish. & mining	1,628	241	123	231	55	36	66
Construction	7,337	3,180	798	672	319	169	118
Food processing	3,759	775	406	833	41	747	18
Lumber & logging	19,620	1,661	1,724	1,464	1,201	628	701
Other manufacturing	3,165	2,314	69	195	145	114	16
Transportation & util.	1,559	761	106	102	48	54	47
Wholesale trade	1,107	612	50	71	18	13	17
Cafes	1,444	556	140	89	33	40	46
Retail trade	2,407	1,142	175	173	66	33	78
Finance & realty	250	159	7	12	11	6	7
Service	3,917	1,467	323	279	118	111	162

BANK DEBITS

Bank debits represent the dollar value of the checks drawn against individual deposits. Payment for approximately 90 per cent of all goods, property, and services is check. Bank debits are regarded as indicators of the general trend of business, though their value for this purpose may be impaired by substantial changes in the level of prices. The Bureau of Business Research collects bank debits from 117 banks and branches monthly. On occasion, the totals for the same month in different issues of the *Review* are not directly comparable because of necessary adjustments in basic data.

Marketing Districts	Number of Banks Reporting	Debits Dec. 1949	Debits Nov. 1949	Debits Dec. 1948	Dec. 1949 Compared with Nov. 1949	Dec. 1949 Compared with Dec. 1948
Oregon	98	$948,351,616	$907,159,941	$981,995,275	+ 4.54%	− 3.43%
Portland (Portland, Hillsboro, Oregon City, etc.)	28	579,795,417	545,172,885	599,520,552	+ 6.35	− 3.29
Lower Willamette Valley (Salem, McMinnville, etc.)	11	75,102,897	77,852,316	69,519,257	− 3.53	+ 8.03
Upper Willamette Valley (Albany, Corvallis, Eugene, etc.)	13	90,610,285	87,509,802	93,940,239	+ 3.54	− 3.54
North Oregon Coast (Astoria, Tillamook, etc.)	5	19,945,210	18,159,946	21,819,937	+ 9.83	− 8.59
Douglas, Coos Bay	5	27,480,868	24,744,182	30,980,525	+11.06	−11.30
Southern Oregon (Ashland, Medford, Grants Pass)	6	42,727,108	40,501,901	41,435,694	+ 5.49	+ 3.12
Upper Columbia River (The Dalles, Hood River, etc.)	7	16,874,518	16,848,108	19,418,965	+ 0.16	−13.10
Pendleton area	6	19,148,532	19,849,605	23,313,492	− 3.53	−17.87
Central Oregon (Bend, Prineville, Redmond)	4	19,468,962	18,252,891	17,688,675	+ 6.66	+10.06
Klamath Falls, Lakeview area	4	25,832,275	26,393,924	31,943,799	− 2.13	−19.13
Baker, La Grande area	6	18,776,992	20,074,463	20,024,572	− 6.46	− 6.24
Burns, Ontario, Nyssa	3	12,588,552	11,799,915	12,389,568	+ 6.68	+ 1.61

BUILDING PERMITS

Building permits give an indication of building operations planned rather than actual construction under way. Care must be taken, in interpreting these data, to allow for the lag which may elapse between the issuance of the permit and the beginning of actual construction. The data have been collected by the Bureau of Business Research.

	New Residential Dec. 1949	New Non-residential Dec. 1949	Additions, Alterations & Repairs Dec. 1949	Totals Dec. 1949	Totals Nov. 1949	Totals Dec. 1948
Astoria	$ ——	$ 325	$ 16,500	$ 16,825	$ 40,251	$ 28,112
Baker	10,500	7,889	22,740	41,129	18,905	2,950
Bend	9,600	10,300	6,050	25,950	20,000	20,400
Coos Bay	12,500	2,000	2,410	16,910	4,850	5,000
Corvallis	17,500	9,000	10,760	37,260	24,605	20,225
Eugene	166,100	34,400	17,070	217,570	262,210	120,360
Grants Pass	10,080	27,707	2,513	40,300	133,762	294,060
Klamath Falls	6,000	2,800	31,809	39,609	55,468	4,060
La Grande	——	350	8,775	9,125	12,135	1,725
Medford	172,000	4,215	11,015	187,230	261,605	56,950
Oregon City	19,300	——	2,000	21,300	73,000	24,500
Pendleton	3,000	850	4,150	8,000	95,898	22,525
Portland	1,865,920	1,141,390	400,535	3,407,845	2,632,800	1,883,360
Springfield	63,400	705	2,035	65,140	88,850	50
The Dalles	85,600	2,900	9,579	48,079	32,730	7,
17 other communities	134,600	54,873	17,505	206,978	404,769	200,640
Totals	$2,525,100	$1,299,204	$ 564,946	$4,389,250	$4,161,838	$2,743,472